

# Leading Trading Platform in India Delivers Enhanced Application Performance with Cisco

Karvy boosts application availability and responsiveness of its online broking application with Cisco Application Control Engine (ACE) appliance

EXECUTIVE SUMMARY
<p><b>Karvy</b></p> <ul style="list-style-type: none"> <li>• Leading trading platform based in Hyderabad, India</li> <li>• Ranks amongst the top 5 stock brokers in India</li> <li>• Offers a wide portfolio of trading services to customers locally</li> </ul> <p><b>Challenge</b></p> <ul style="list-style-type: none"> <li>• Increase the availability and performance of its business applications</li> <li>• Enhance the level of customer satisfaction</li> </ul>
<p><b>Solution</b></p> <ul style="list-style-type: none"> <li>• Cisco Application Control Engine</li> </ul>
<p><b>Results</b></p> <ul style="list-style-type: none"> <li>• Consistent uptime of business applications</li> <li>• Reduced response time between application and customers</li> <li>• Enhanced IT resource utilization</li> </ul>

## Introduction

The Karvy Group is one of the leading trading platforms operating in India today. Founded in 1983, it grew out of Hyderabad to become a member of the National Stock Exchange of India and the Bombay Stock Exchange. It consistently ranks amongst the top 5 stock brokers in India.

The organization provides a vast platform for trading. It ensures safe trading by taking into account several risk factors and planning accordingly. This is supported by in-depth research, extensive feedback, sound advisory facilities and a highly skilled research team. Karvy's customers are given result-oriented information on market trends, market analysis and market predictions. These results are disseminated through a daily series of reports, allowing customers to be aware of market trends at any point in the day.

The company currently manages over 600,000 accounts. It has 25,000 investors visiting their global offices daily and executes more than 150,000 trades on the National and Bombay Stock Exchange. Hence, Karvy's daily operations are extremely demanding. Apart from having to create the abovementioned reports, the organization's data centers must ensure that trading requests are promptly processed and delivered.

## Business Challenge

Karvy's primary reason for upgrading the way its data centers handled application traffic lay in its web-based Online Trading Application (Karvy Online), a customer facing application used primarily by brokers. "Karvy Online is a customer facing application, which means that it is open for transactions round the clock," Sreenivasa Reddy Inukollu, General Manager, Technology, Karvy, explained. Application unavailability could potentially lead to customer dissatisfaction and possible loss of customers and revenue.

Furthermore, the company was not just interested in maintaining application availability, but it also wanted to improve the response time of OTA. "Karvy Online is accessed by brokers

throughout the course of an entire day. This makes it one of our most utilized applications. With our wide base of customers, it is important that we provide the best response times to each and every one of them," Sreenivasa Reddy said. By lowering the response times of its applications, Karvy can increase the value of its services to its customers, gaining an edge over the market competition.

"Our internal servers have become more efficient, thanks to the multi-function capability of the Cisco ACE 4710 appliance. The new device has performed at 100 percent uptime," Sreenivasa Reddy Inukollu, General Manager, Technology, The Karvy Group

Karvy's previous network infrastructure was not able to optimize these two processes. As Karvy Online was a secure application, Karvy's servers had to perform SSL offloads, which was a resource draining process. In terms of load balancing, the organization was using traditional methods of load balancing based on DNS protocols. Unfortunately, these methods made the network configuration and management complex and time consuming, and was not providing the results they needed. "We wanted to provide transparent load balancing and failover from the end user perspective, something which our old network could not do," Sreenivasa Reddy elaborated.

## Solution

Having a previous working relationship with Cisco, Karvy returned immediately to the market leader in networking and communication solutions. "We were familiar with Cisco's unparalleled expertise in the field of networking and the cutting edge solutions they employ. There were no doubts in our minds that they could provide the answer to our problems," Sreenivasa Reddy said.

To address application performance, Karvy decided to deploy the Cisco Application Control Engine (ACE) 4710 appliance. The Cisco ACE 4710 Application Control Engine appliance uses a full range of Cisco application switching technologies and server offload with SSL, caching, and TCP processing. By incorporating the Cisco ACE appliance, will stand to benefit from flexible application traffic management. ACE will free Karvy's web servers from having to perform SSL encryption.

The multi-function capabilities of ACE attracted Karvy to the solution. The upgrade requirements – load balancing, SSL offload, Application Security and virtualization – were all met in a single ACE appliance. "Cisco ACE fulfilled all of Karvy's expectations for a suitable solution – which was simple to install, manage and compatible with our existing infrastructure," Sreenivasa Reddy revealed.

Once the solution was agreed on, Cisco began the implementation process immediately. The Cisco ACE 4710 appliances were connected to Karvy's Cisco Catalyst 4507R switches at the server farms. The entire process of testing, staging and deployment took only seven days.

## Results

The results from installing the ACE solution have been positive. The ACE has improved the quality and productivity of Karvy's services to its customers, according to Sreenivasa Reddy. "The ACE solution has achieved all the objectives planned in the upgrade, that is to increase application availability, improve response times and generate higher productivity of our IT resources," Sreenivasa Reddy said.



**Figure 1. With Cisco, Karvy has enabled faster and more reliable financial services, facilitating the speed and efficiency of many customer transactions.**

So far, Karvy has maintained constant application uptime to its customers, largely due to the presence of Cisco ACE. "The new device has performed at 100 percent uptime. Our customers are generally pleased by the uninterrupted availability of our critical applications. This has greatly smoothed out the flow of the trading experience for our clients and brokers." Sreenivasa Reddy said.

Karvy has also managed to decrease the response times for the Karvy Online application. Customers can now access and work from the application without the hassle of long loading times. Sreenivasa Reddy said, "Customers are finding our applications more responsive. Server response times to customer requests have decreased significantly, creating a more fluid and rapid trading process."

With highly available and faster applications, Karvy discovered that customers are becoming increasingly satisfied with their level of service. "We are getting positive feedback from our clients and associated brokers. They love the fact that they can access their applications whenever and wherever they want; and that our servers are so prompt and sensitive to their requests," Sreenivasa Reddy said.

With Cisco ACE, Karvy has managed to increase the efficiency and productivity of their IT resources. "Our internal servers have become more efficient, thanks to the multi-function capability of the Cisco ACE 4710 appliance. Services such as application security, SSL offload and Virtual Contexts are managed under a single appliance. Furthermore, the appliance is able to connect and manage our production and pre-production servers that contain different load balancing policies and security profiles. The entire process hardly requires any human intervention," Sreenivasa Reddy said. Consolidating the processes has also resulted in lower operating expenditures.

With Cisco ACE, Karvy has created a streamlined infrastructure that can deliver best-of-breed technologies and services to its clients, ensuring a high level of customer satisfaction

### Next Steps

Karvy has plans to further capitalize on the ACE's abilities. "With Cisco ACE, Karvy can handle the roll-out of new applications easily with its single management console. There are several upcoming projects that will deploy ACE beyond merely load balancing capabilities. Our organization wishes to deploy additional functions on this very capable solution," Sreenivasa Reddy said.

#### PRODUCT LIST

- Cisco Application Control Engine (ACE) 4710 Appliance
- Cisco Catalyst 4507R switch

The solution has also readied Karvy for future growth, as Cisco ACE readily scales to additional connections without requiring major hardware upgrades. "Performance scalability can be achieved only through software licensing, and that helps us address the growth in users and applications," Sreenivasa Reddy said.

### For More Information

For more information on Cisco Application Control Engine, visit:  
[www.cisco.com/en/US/products/ps6906/index.html](http://www.cisco.com/en/US/products/ps6906/index.html)

For more information on Karvy, visit:  
[www.karvy.com](http://www.karvy.com)



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